

CLAIMSWHAT IS CLAIMED:

- Sub A17
1. A method for transmitting communication between first and second communication units over a plurality of radio frequencies, the method comprising:
- 5     setting the first and second communication units to respectively transmit and receive communication over a first radio frequency during a first time frame;
- 10     selecting a second radio frequency during the first time frame; and
- 10     setting the first and second communication units to respectively receive and transmit communication over the second radio frequency during a second time frame.
- Sub C17
2. The method of claim 1, wherein selecting a second radio frequency, further comprises:
- 15     selecting a second radio frequency by the first and second communication units during the first time frame.
3. The method of claim 1, further comprising:
- 20     selecting a third radio frequency during the second time frame; and
- 20     setting the first and second communication units to respectively transmit and receive communication over the third radio frequency during a third time frame.
4. The method of claim 3, wherein selecting a third radio frequency, further comprises:
- 25     selecting a third radio frequency by the first and second communication units during the second time frame.

5. The method of claim 1, wherein setting the first and second communication units to respectively transmit and receive communication over a first radio frequency during a first time frame, further comprises:

5        setting a transmitter of the first communication unit and a receiver of the second communication unit over a first frequency to respectively transmit and receive communication between the first and second communication units during a first time frame.

10        6. The method of claim 1, wherein setting the first and second communication units to respectively receive and transmit communication over the second radio frequency during a second time frame, further comprises:

15        setting a receiver of the first communication unit and a transmitter of the second communication unit over the second radio frequency to respectively receive and transmit communication between the first and second communication units during a second time frame.

20        7. The method of claim 3, wherein setting the first and second communication units to respectively transmit and receive communication over the third radio frequency during a third time frame, further comprises:

      setting a transmitter of the first communication unit and a receiver of the second communication unit over the third radio frequency to respectively transmit and receive communication between the first and second communication units during a third time frame.

8. The method of claim 1, wherein selecting a second radio frequency during the first time frame, further comprises:

selecting an initial frequency by a voltage controlled oscillator of the first and second communication units and tripling the initial frequency by a frequency multiplier to select a second radio frequency during the first time frame.

9. The method of claim 3, wherein selecting a third radio frequency during the second time frame, further comprises:

selecting an initial frequency by a voltage controlled oscillator of the first and second communication units and tripling the initial frequency by a frequency multiplier to select a third radio frequency during the second time frame.

10. The method of claim 1, wherein the first communication unit is a base unit and the second communication unit is a remote unit of a cordless telephone system.

11. An apparatus, comprising:

a first and second communication unit for communication therebetween over a plurality of radio frequencies, the first and second communication units each including:

a controller adapted to set the first and second communication units to respectively transmit and receive communication over a first radio frequency during a first time frame, select a second radio frequency during the first time frame, and set the first and second communication units to respectively receive and transmit communication over the second radio frequency during a second time frame.

Subcl 7

12. The apparatus of claim 11, wherein the controller is further adapted to select a third radio frequency during the second time frame, and set the first and second communication units to respectively transmit and receive communication over the third radio frequency during a third time frame.

5

13. The apparatus of claim 11, wherein said first and second communication units further comprise:

a transmitter; and

a receiver; and

10 wherein the controller is further adapted to set the transmitter of the first communication unit and the receiver of the second communication unit over a first frequency to respectively transmit and receive communication between the first and second communication units during the first time frame.

15 14. The apparatus of claim 13, wherein the controller is further adapted to set the receiver of the first communication unit and a transmitter of the second communication unit over the second radio frequency to respectively receive and transmit communication between the first and second communication units during the second time frame.

20 15. The apparatus of claim 12, wherein said first and second communication units further comprise:

a transmitter; and

a receiver; and

25 wherein the controller is further adapted to set the transmitter of the first communication unit and the receiver of the second communication unit over

the third radio frequency to respectively transmit and receive communication between the first and second communication units during the third time frame.

16. The apparatus of claim 13, wherein the transmitter and receiver of the first and second communication units each include:

a voltage controller oscillator controlled by a phase-locked loop; and

a frequency multiplier; and

wherein the voltage controlled oscillator is adapted to select an initial frequency and

the frequency multiplier is adapted to triple the initial frequency to select the second radio frequency during the first time frame.

17. The apparatus of claim 15, wherein the transmitter and receiver of the first and second communication units each include:

a voltage controller oscillator controlled by a phase-locked loop; and

a frequency multiplier; and

wherein the voltage controlled oscillator is adapted to select an initial frequency and

the frequency multiplier is adapted to triple the initial frequency to select the second radio frequency during the third time frame.

18. The apparatus of claim 11, wherein the apparatus is a cordless telephone system.

19. The apparatus of claim 11, wherein the first communication unit is a base unit and the second communication unit is a remote unit of a digital cordless telephone system.

20. The apparatus of claim 19, wherein the base unit is coupled to the public switched telephone network (PSTN).

5

10

15

20

25